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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,678	07/30/2003	Junji Kunisawa	2003_1074	6560

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EXAMINER
PERRIN, JOSEPH L

ART UNIT	PAPER NUMBER
1746	

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,678

Applicant(s)

KUNISAWA ET AL.

Examiner

Joseph L. Perrin, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 & 5-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 & 5-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Upon further review and consideration of the parent application, the finality of the previous Office action is withdrawn in view of the previously cited reference(s) to U.S. Patent No. 5,534,073 to KINOSHITA *et al.* & U.S. Patent No. 6,164,133 to WATANABE. Rejections based on the newly cited reference(s) follow.

Allowable Subject Matter

2. Upon further review and consideration of the parent application, the indicated allowable subject matter of claim 13 is withdrawn in view of the previously cited reference(s) to U.S. Patent No. 5,951,833 to YAMAGATA & U.S. Patent No. 5,534,073 to KINOSHITA *et al.* & U.S. Patent No. 6,164,133 to WATANABE. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1 & 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,951,833 to YAMAGATA. Re claim 1, YAMAGATA discloses a substrate holding unit with a holding plate (102) having an aperture (opening 103) and vacuum suction members (104) contacting only the outer periphery of the substrate (101), thereby defining "a space" sealed from one side of the substrate (see, for instance, col. 10, line 54 - col. 11, line 30; Figure 1). Re claim 5, YAMAGATA further discloses the holding unit in combination with a surface processing unit (anodizing apparatus, see,

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col. 2, line 56 *et seq.*). Re claim 6, YAMAGATA further discloses using the holding unit and surface processing unit with a cleaning apparatus and/or a drying apparatus (see, col. 4, lines 1-6). Re claim 7, YAMAGATA further discloses using a dipping bath (see, col. 7, line 21, as well as Figure 1 and relative associated text). It is noted that applicant's recitation of purging gas is considered intended use and given little weight. That is, recitations that the space "can be purged by blowing N₂ gas thereinto..." and the purging aperture being "for blowing the N₂ gas into the space..." do not positively recite structure relating to the gas, such as being connected to an N₂ gas source. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). Recitation of YAMAGATA reads on applicant's claimed invention.

5. Claims 1 & 5 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,534,073 to KINOSHITA *et al.* (hereinafter "KINOSHITA"). Re claim 1, KINOSHITA discloses a wafer holding unit comprising an holder plate (101) and an outer peripheral vacuum suction member defined by two annular grooves (107) formed by at least two ring-shaped members, apertures (113/108) and the vacuum chuck device having a purging aperture ("holes of a vacuum chuck are provided corresponding to holes of a gas nozzle provided at a position making a pair with the vacuum chuck", see, for instance, col. 8, lines 47-51 of Kinoshita *et al.*) (see *a/so* Figures 11-18 and relative

associated text). Re claim 5, KINOSHITA discloses a semiconductor processing (producing) device having the wafer chucking (holding) device and surface processing unit (CVD device), and cleaning (for instance, col. 1, lines 9-18).

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over KINOSHITA in view of U.S. Patent No. 6,164,133 to WATANABE. Recitation of KINOSHITA is repeated here from above. Although KINOSHITA discloses a surface processing unit for CVD and cleaning, KINOSHITA does not expressly disclose a processing apparatus including a surface processing unit, an cleaning/drying unit, a dipping bath and an evaluation unit. WATANABE teaches that it is known to utilize a vacuum wafer holding unit as a part of a processing apparatus (30) with a surface processing unit (23), a dipping bath (24) in which the substrate is lowered by the holding unit "so that its entire surface is immersed into the collecting liquid", a cleaning unit (ultrasonic means (23') or heating means (23'')) used for "removing contaminating matter and impurities by cleaning", and an evaluation unit (not shown) for "surface analysis" (see entire reference of WATANABE, for instance, Figure 1, col. 3, lines 26-35, col. 4, lines 14-33, and col. 7, lines 15-20). Therefore, the position is taken that a person of ordinary skill in the art at the time the invention was made would have been motivated to modify the processing apparatus including a vacuum wafer holding unit,

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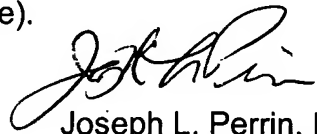
disclosed by KINOSHITA, with the processing apparatus, disclosed by WATANABE, in order to provide improved, thorough processing and cleaning of a semiconductor.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Perrin, Ph.D. whose telephone number is (571)272-1305. The examiner can normally be reached on M-F 7:00-4:30, except alternate Fridays.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Joseph L. Perrin, Ph.D.
Examiner
Art Unit 1746

jlp